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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,443	02/19/2002	Atsuhiro Ohkawa	030662-082	9882

7590 06/22/2005

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EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/076,443

Applicant(s)

OHKAWA ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/22/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Rejections Repeated***

1. The 35 U.S.C. 103(a) rejections over Larson in view of Sekine as the primary combination, have been repeated for the same reasons previously of record in the Office action dated 11/22/04.

### ***Response to Arguments***

2. Applicant argues that the secondary reference Sekine has no disclosure or suggestion of the use of general formula (I) compound thereof in a polarization sensitive scattering element (PSSE) as disclosed by Larson, and that therefore Sekine does not provide any motivation to combine Larson with Sekine.

Applicant is respectfully reminded that Larson teaches that liquid crystal (LC) has to have high birefringence in order to ensure that one of the refractive index is highly mismatched with the corresponding index of the polymer of the polymer dispersed liquid crystal (PDLC) (column 6, lines 36-46). Sekine teaches that the liquid crystal has a large anisotropy of refractive index for use in a PDLC type liquid crystal element (column 1, lines 10-20). The large anisotropy of refractive index of the liquid crystal of Sekine ensures that one of the refractive index is highly mismatched with the corresponding index of the polymer of the PDLC of Larson, meeting the criterion of Larson for a high birefringent LC, thus providing the motivation to combine. Sekine teaches that the liquid crystal is used in a PDLC type liquid crystal element, and is therefore analogous art. Therefore the combination of Larson in view of Sekine is valid.

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3. Applicant argues that Larson discloses that US 4,685,771 describes a PDLC structure for use in the Larson polarized display, wherein the liquid crystal is completely different from the general formula (I) compound disclosed by Sekine, such that one of ordinary skill in the art would not have been motivated to modify the PDLC of Larson with the general formula (I) compound of Sekine.

Applicant is respectfully apprised that Larson was disclosing US 4,685,771 as one example of a PDLC and that others have reported related structures with similar polarization sensitive scattering properties (column 6, lines 1-5). Larson teaches the use of "a suitable high birefringence LC" (column 6, lines 42-50), and therefore teaches the use of other liquid crystals as long as they have suitably high birefringence. The LC of Sekine has a large anisotropy, and therefore has suitably high birefringence.

4. Applicant argues that the mere use of a large anisotropy of refractive index does not fairly suggest the use of the general formula (I) compound of Sekine in the PSSE disclosed by Larson, since at best, Sekine's disclosure concerning the large anisotropy of refractive index may suggest that the general formula (I) is suitable for use as a liquid crystal.

Applicant is respectfully apprised that the general formula (I) compound of Sekine is a liquid crystal by the nature of its molecular structure (column 1, lines 10-20). As discussed above, the large anisotropy of refractive index of the liquid crystal of Sekine ensures that one of the refractive index is highly mismatched with the corresponding index of the polymer of the PDLC of Larson, meeting the criterion of Larson for a high birefringent LC, thus providing the motivation to combine. Sekine

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teaches that the liquid crystal is used in a PDLC type liquid crystal element, and is therefore analogous art. Therefore the combination of Larson in view of Sekine is valid.

5. Applicant argues that Shen fails to cure the deficiency of Larson [to provide motivation for the use of the liquid crystal of Sekine].

Applicant is respectfully directed to the discussion above.

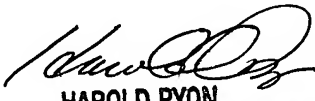
Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon.  
Sow-Fun Hon

06/16/05

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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6/20/05